

IN THE CLAIMS

Claims 9, 14, 15, 18 and 21-27 are pending in this application. Please cancel claims 1-8, 10-13, 16-17 and 19-20 without prejudice or disclaimer, amend claims 9, 14, 15 and 18, and add new claims 21-27 as follows:

1-8. (Canceled)

9. (Currently Amended) [[The]] A direct conversion receiver according to claim 5, comprising:

a pair of mixers which convert a receive signal frequency to a baseband frequency;

a baseband frequency signal processing block including a pair of first gain control amplifiers and a pair of first filters, following said mixers; and

a pair of DC offset cancellation circuits, each comprising:

an analog to digital converter which is connected to an output of one of said pair of first gain control amplifiers to convert analog signals to digital signals;

a digital processing circuit which detects a DC offset voltage out of output signals from said analog to digital converter and calculates a voltage to cancel the DC offset voltage; and

a digital to analog converter which converts a digital signal of the voltage calculated by the digital processing circuit into an analog signal of the voltage and supplies the analog signal of the voltage to said one of said pair of first gain control amplifiers,

wherein said baseband frequency signal processing block further includes a pair of negative feedback circuits with an adjustable feedback factor, each negative feedback circuit including a second filter of low-pass type,

wherein said direct conversion receiver performs DC offset cancellation by means of said pair of DC offset cancellation circuits when being powered on and, subsequently, performs DC offset cancellation by means of said pair of negative feedback circuits.

10-13. (Canceled)

14. (Currently Amended) ~~[[The]]~~ A direct conversion receiver according to claim 13,
comprising:
a pair of mixers which convert a receive signal frequency to a baseband
frequency; and
a baseband frequency signal processing block including a pair of first gain
control amplifiers and a pair of first filters, following said mixers,
wherein said baseband frequency signal processing block further includes a
pair of negative feedback circuits with an adjustable feedback factor, each negative
feedback circuit including a second filter of low-pass type,
wherein said pair of first gain control amplifiers have multistage compositions
in which a pair of first-stage amplifiers are a pair of static gain amplifiers to which a
pair of DC offset cancellation circuits are attached respectively, each said DC offset
cancellation circuit comprising:
an analog to digital converter which is connected to an output of one of said
pair of first gain control amplifiers to convert analog signals to digital signals;
a digital processing circuit which detects a DC offset voltage out of output
signals from said analog to digital converter and calculates a voltage to cancel the DC
offset voltage; and
a digital to analog converter which converts a digital signal of the voltage
calculated by the digital processing circuit into an analog signal of the voltage and
supplies the analog signal of the voltage to said one of said pair of first gain control
amplifiers,
wherein said pair of static gain amplifiers perform DC offset cancellation by
means of said pair of DC offset cancellation circuits when said direct conversion
receiver is powered on and, subsequently, DC offset cancellation is performed by
means of said pair of negative feedback circuits.
15. (Currently Amended) ~~[[The]]~~ A direct conversion receiver according to claim 1,
comprising:
a pair of mixers which convert a receive signal frequency to a baseband
frequency; and
a baseband frequency signal processing block including a pair of first gain
control amplifiers and a pair of first filters, following said mixers,

wherein said baseband frequency signal processing block further includes a pair of negative feedback circuits with an adjustable feedback factor, each negative feedback circuit including a second filter of low-pass type,

wherein each of said pair of first gain control amplifiers is made up of multiple stages of gain control amplifiers and a last-stage static gain amplifier and each said negative feedback circuit loops back to an output of a first-stage gain control amplifier.

16-17. (Canceled)

18. (Currently Amended) ~~[[The]]~~ A direct conversion receiver according to claim 1,
comprising:

a pair of mixers which convert a receive signal frequency to a baseband frequency; and

a baseband frequency signal processing block including a pair of first gain control amplifiers and a pair of first filters, following said mixers,

wherein said baseband frequency signal processing block further includes a pair of negative feedback circuits with an adjustable feedback factor, each negative feedback circuit including a second filter of low-pass type,

wherein said pair of first gain control amplifiers are pair of gain control amplifiers having circuitry in which a plurality of different resistance elements are located so as to connect to a common terminal of the emitter side of a couple of differential transistors and gain is changed in steps by switching on/off current flowing through the plurality of resistance elements.

19-20. (Canceled)

21. (New) The direct conversion receiver according to claim 9,

wherein each said negative feedback circuit comprises a second amplifier and said second filter located, following an output end of the second amplifier.

22. (New) The direct conversion receiver according to claim 9,

wherein said second amplifier is a gain control amplifier.

23. (New) The direct conversion receiver according to claim 9,
wherein said second filter is a low-pass filter with an adjustable cut-off frequency.
24. (New) The direct conversion receiver according to claim 15,
wherein each said negative feedback circuit comprises a second amplifier and said second filter located, following an output end of the second amplifier.
25. (New) The direct conversion receiver according to claim 15,
wherein said second amplifier is a gain control amplifier.
26. (New) The direct conversion receiver according to claim 18,
wherein each said negative feedback circuit comprises a second amplifier and said second filter located, following an output end of the second amplifier.
27. (New) The direct conversion receiver according to claim 18,
wherein said second amplifier is a gain control amplifier.